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"WHERE ROLLS THE OREGON."

"A silvery current flows
With uncontrolled meanderings;
Nor have these eyes by greener hills
Been soothed, in all my wanderings."

THE THREE TETONS.
NEAR THE SOURCE OF THE COLUMBIA.

DURING a recent visit to the Atlantic seaboard the writer had a very pleasant interview with one of the greatest travelers and most noted political economists of our day, the principal topic being the destiny of the region west of the Mississippi. Among other things, I asked the savant what natural division of North America he considered the richest in those important elements which go to make up great commonwealths.

"The land 'Where Rolls the Oregon,'" he quickly replied, and then deliberately added, "I have for years marveled that regions to the south of it, whose resources are not to be compared for a moment with those it possesses have so easily secured the preponderance of attention. Why, sir, our Creator so endowed that wonderful northwest that children now born will there see developed an industrial world like our own New England, a coal and iron empire not inferior to Pennsylvania, a score of wheatfields like Illinois, half a dozen fruitful Delawares, and a precious metal kingdom whose like the earth has never known!"

"WHY IT IS."

It is really not so wonderful, as the learned gentleman seemed to think, that even such a country has remained undeveloped until these closing years of the nineteenth century. The south and southwest had two hundred years the start in practical exploration, a vast advantage in accessibility, as the lines of commerce have hitherto been drawn, and an incalculable precession on account of early settlement of ownership. The Columbia, first named the "Oregon," was only discovered by Capt. Gray in 1792, and my noble old grandfather, yet living, remembers well when Napoleon Bonaparte, who always did business on a basis of hard cash, sold us all the region it drains, with an additional area large enough to have covered his loved empire, for $15,000,000. After buying it for a song

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(which transaction has somehow stamped the region among other nations as of little account) from an emperor who was generally considered able to deliver his goods, we spent nearly half a century in getting a clear title, and permitted all sorts of indignities to be heaped upon its colonists by savage and civilized foes. It is only thirty-five years since the whole of this north-western section of the country was formally ceded by Great Britain to the United States. As late as 1825, a prominent member of the United States Senate, in his speech opposing the erection of one solitary fort in the vast Columbia river country, said: "Oregon can never become one of the United States. It can never be of any essential benefit to the Union; therefore it is inexpedient to adopt any measure for its occupation and settlement. Suppose it ever should have a member of Congress and he should travel thirty miles a day, allowing for Sundays, 350 days of the year would be required to come to the Capital and return. A young, able-bodied senator might travel from Oregon to the Capital and back once a year, but he could do nothing else. He might come more expeditiously through Behring's Strait, round the northern coast of the continent to Baffin's Bay, thence to the Atlantic and so on to Washington. Of course this passage has not yet been discovered, *but it will be as soon as Oregon becomes a State!*"

He lived to see four great commonwealths carved from Oregon, each of which can yet be subdivided into six larger and naturally richer states than that which sent him to the Senate; and the Oregon Congressman of 1883 will be able to ride from Portland to our National Capital in a Palace car in six days.

AN OUTLINE.

The two great streams which form the Columbia are known as Clarke's Fork, on the north, and Lewis' Fork, or Snake, on the south. These rivers and their tributaries permeate the vast, unique, and valuable region lying between the Rocky Mountains and the Pacific Ocean, bounded on the south by the forty-first parallel and on the north by the fifty-third, the area positively embraced in this drainage being nearly 400,000 square miles. All of Oregon, Washington, and Idaho and portions of Montana, Wyoming, Utah and Nevada belong to this empire of the northwest. This country with its present sprinkling of 285,000 inhabitants is larger than Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Pennsylvania, Ohio, Indiana, Illinois and Iowa, where nearly 25,000,000 of people reside.

As a great geologist and geographer once wrote: "The Atlantic coast, with its crowded population, its refined civilization, its great cities, its seats of learning and stupenduous industrial operations, forms only a fringe on the eastern border of this vast domain."

ONE GREAT RIVER.

The Columbia ranks with the greatest rivers of the world. From its dual birth among the most magnificent scenes of earth, in the heart of Yellowstone National Park, and in the richest section of that empire of Western empires, Montana, down through its two thousand five hundred miles of irresistible sweep to our Western sea, it is an avenue of wealth and wonders. For 200 miles from the Pacific inland it averages about two miles in breadth, reaching over six miles near its mouth. Engineers estimate that it carries off a volume of water but little if any less than the Mississippi. Its immense drainage may be imagined from the fact that during the melting of the snows in the northwestern mountain ranges its daily increase for days at a time has been equal to the entire volume of the Hudson. It is the only river in our great republic which will receive deep sea-going vessels 120 miles into the interior or a river steamer 1,000 miles inland among the Cascade, Blue, Bitter Root and Rocky Mountains. These navigable waters reach 250 miles into a rich region of British America.

LEWIS FORK OR SNAKE.

The extreme Eastern source of the Columbia is Lewis Fork, or Snake River, which rises among the most marvelous scenes of Yellowstone Park, in longitude 111° within a few feet of the crystal founts from which springs that great tributary of the mighty Mississippi, the Yellowstone, and within sight of the headwaters of that grand inlet of the Gulf of California—the Rio Colorado.* Here, at its romantic start, the Snake is also only a day's ride from its twin torrent of the North (Clarke's Fork), but soon sweeps southward five hundred miles as if to gather in the widest and richest field. Again, flowing majestically northward to mark the boundary between Idaho and Oregon it unites, when within 400 miles of the Pacific, with the Clarke Fork system to form the true Columbia. It will lead the reader toward a true appreciation of the wondrous volume of the Snake when he is informed that soundings of the deep blue stream in Eastern Idaho, near the crossing of the Utah & Northern branch of the Union Pacific Railway, failed to discover bottom *at two hundred and forty feet.* The Snake's greatest feeder from the south, Owyhee River, rises in the silver State of Nevada at longitude 41°, 800 miles south of a beautiful lakelet in British Columbia, from which Canoe River, the most northerly tributary of the Columbia, meanders southward to the common reservoir. The Salmon, Clearwater, Boise, Payette, Weiser and Wood rivers, named in the order of their size, flow into the Snake from the north. The two first named are as large as the Delaware at Easton. The Snake is navigable for 300 miles above its junction with Clarke's Fork and for 200 miles in the heart of Idaho, 1,000 miles from the sea, as well as for shorter stretches in other localities. The Clearwater also affords a considerable stretch of navigable waters.

An interesting bit of history illustrating the vast extent of inland navigation made possible by the Columbia and its tributaries is that of the steamer Shoshone. It was built in 1866, on Snake River, at a point 90 miles from Boise City, Idaho, and for a number of years ran up the Snake to within 125

miles of Salt Lake, almost under the shadow of the Wasatch. The venture at that early day proved unprofitable, and in spite of cascades, reefs and rapids in the Blue and Cascade Mountains, the stannch little craft was run safely down to the sea, a distance by river of 1,000 miles.

CLARKE'S FORK.

The eastern source of Clarke's Fork is Deer Lodge River, rising in Western Montana within a few steps of springs which feed the Missouri. Here, for the purpose of washing gold in the rich field found at this (Deer Lodge) pass of the Rocky Mountains, parties have dug a ditch only eighteen feet deep at the apex of the pass through which the waters of the Missouri have been turned into the waters of the Columbia—the waters of the Gulf of Mexico into the Pacific ocean—an operation sometimes called highway robbery. There are those bold enough to predict that the day may come when engineering skill shall give water transportation by way of these remarkable streams 6000 miles through the heart of the four great mountain ranges of our continent, uniting the Atlantic and Pacific oceans. At present their navigable waters are only 450 miles apart.

For a thousand miles Clarke's Fork sweeps to the northwest, crossing far into the British Possessions before making its final dash southward to its union with Lewis Fork or the Snake. Joined 100 miles from its source by the Blackfoot—a stream as large as the Alleghany at Salamanca—the current takes the name of Hellgate; soon swelled by the beautiful Bitter Root, it is called the Missoula; near the western Montana boundary, after absorbing that magnificent torrent, the Flathead, and the more beautiful Pend d' Oreille, it for a time speeds on under the musical title last given, and when fairly across the British line it joins a vast flood from the distant north it is generally called the Columbia, although many reserve that more dignified name until it has finally mingled its waters with Lewis Fork or the Snake. In that far northern region it absorbs the Kootenai, a stream as large as the Mississippi above St. Paul, and in Eastern Washington the Spokan, which discharges a greater volume than the Ohio at Cincinnati, the Methow, Chelan, Wenachee, Yakima and other rivers, any one of which would compare favorably in size with the prominent streams of New England. As already noted, its extreme northern tributary, Canoe River, rises in latitude 53°. Feeders of the Columbia in that vicinity rise within a stone's throw of the Saskatchewan, whose waters finally reach Hudson Bay, 1,000 miles northeast, and the Athabasca, which after some 2,000 miles of northward windings enters the Arctic ocean as Mackenzie River.

Thus this father of western waters permeates a region so vast in extent and so singular in conformation that *it alone, of all the rivers of our continent, joins hands with the greatest water courses entering the Atlantic, Pacific and Arctic oceans and the Gulfs of Mexico and California.*

"Time's Noblest Empire is the Last."

IT is a fruitful and a boundless theme. It was a master hand that marked the course of this mighty river, but that master hand was most lavish in its endowment of the region itself. In exhaustlessness and variety of resources no other country on the globe equals this of ours in the New Northwest. There is an atmosphere to coax to the fullest perfection all the various productions of the north temperate zone, to charm by its beauty and heal by its purity; here are valleys more extensive and fertile than the famed Danube or Nile; more bountiful deposits of gold and silver, iron and coal, copper and lead, than are found within equal limits in the world beside; its monarchs of the forest, its stupendous vegetable productions challenge the universe. In grand natural curiosities and wonders all other countries combined fall far below it. A few

PROMINENT CHARACTERISTICS

of the region aside from the water-courses already outlined, are the moutain ranges, the valleys and the plains. It is traversed north and south by the four or five greatest ranges of our country. First on the east the Rockies and Bitter Root, next the Blue, then the Cascade, and lastly the Coast range. In addition to these are more isolated mountain ranges whose trend is not generally so regular or well-defined, such as the Salmon River, Sawtooth, Cœur d'Alene, Owyhee, Umpquah, etc. These mountains vary in altitude from 5,000 to 14,000 feet. It is on these and their numerous spurs that the forests are mainly found, and among them are grouped the many belts of precious and base metals. These mountains also give forth the myriad glittering springs and treasure up the vast reserves of snow and ice, which in summer send an unfailing and regular supply of water through thousands of rivulets, creeks and rivers to refresh and fertilize the lowlands.

Then are the valleys—the country's precious gems—one hundred or more of them ranging in length from 25 to 200 miles, and in breadth from two to fifty miles, and thousands of others, smaller, but just as fertile and generally more attractive. Enchanting little vales, coy parks hidden among the hills, these are indeed innumerable. Their altitude varies from a little above sea level to 5,000 feet. They are generally considerably depressed below the surrounding formation and are often well sheltered by overlooking mountain ranges.

The plains, more elevated than the valleys, stretch over a vast extent of the country east of

the Cascade Mountains. The Snake River Plains, in the southern section of the region in question, are some 300 miles in length by 250 in breadth, possessing an elevation of from 2,500 to 4,500 feet above the sea, and in the main being fit only for grazing. The Great Plains of the Columbia, in the northern portion of the region, nearly equal the Snake River plains in extent, possess a much lower average elevation and afford the largest unbroken body of agricultural lands west of our prairie states. Camas Prairie, in central Idaho, is twenty by eighty miles in extent. Horse Plains, in western Montana, is nearly as large. Teton Basin, in western Wyoming, 800 square miles in extent, and other similar plateaux, possess wide areas of productive farm lands at an elevation above the sea of from 3,000 to 6,000 feet.

OF ITS EXTENT AGAIN.

In this vast drainage of 400,000 square miles are 50,000,000 acres of wheat lands, capable of producing the enormous amount of 1,000,000,000 bushels of wheat annually (or an equivalent) placing the yield at a low average for that region of twenty bushels per acre. This is about twenty times the production of the great state of Illinois in 1881. The region also possesses some 60,000,000 acres of grazing lands, a larger territory than New York, New Jersey, Massachusetts and New Hampshire combined. The possibilities of such a pasture field are almost beyond calculation. The forests of this vast domain are greater and more valuable than those in all of our States north of the Ohio River and east of the Mississippi. The mineral field underlies tens of thousands of square miles of the forest area. Gather together all there is of England, Scotland, Belgium, Holland, France, Denmark and Switzerland, where over 85,000,000 of people dwell, and it does not equal the watershed of the Columbia and its tributaries. And all those countries have their mountains and timber and their barren and waste lands and are growing, increasing, and developing yet, and will continue for ages to come, notwithstanding heavy annual depletion from emigration.

To impress the reader still more forcibly with the size and destiny of our land "where rolls the Oregon," let me quote a recent comparison made by Hon. M. C. George, a Congressman from that country: "Put your finger on a map northwest of Chicago, pass it thence easterly to include Detroit and Toledo and Cleveland and Buffalo and Montreal and Boston; thence follow down the coast and include New York and Brooklyn and Philadelphia and Baltimore; thence westerly and include Cincinnati and Saint Louis; and then to Chicago again, and although you have outlined a scope of country which includes all the great cities of America save New Orleans and San Francisco, and an area where over 23,000,000 of people reside, yet you have traced a country only about seven-eighths the size of the great Northwest of the Pacific."

As to Climate.

"How canst thou walk in these streets, who hast trod the green turf of the prairies?
How canst thou breathe in this air, who hast breathed the sweet air of the mountains?"

SAID a prominent writer on western affairs recently: "The Montana mountaineers will have to fight cold winters and deep snows, but that kind of a battle is better for a man's energies than to search a shady place and smoke cigarettes. It is a better climate to develop energies and make strong patriotism. It is fitted for young blood. It is such a climate as never overhangs the homes of any except brave, earnest men, and earnest and true women." Said Hon. Samuel Bowles in writing of the Puget Sound country: "Up here above the latitude of Quebec and Montreal we basked in the smile of roses that are even denied to us in New England. Here, within this circle of the softening sea, reigns a year that knows no zero cold, and rarely freezing water or snow; that winters fuchsias and the most delicate roses, English ivies and other tender plants, and summers them with rioting luxuriance; that grows the apple, the pear and the small fruits to perfection," and a noted writer on climatology adds, "the climate of eastern Oregon or Washington is like that of France and that of the western portion of these commonwealths like one produced by adding the mildness of Virginia to the moisture of England."

The truth is, this great kingdom of variable altitudes and of "most magnificent distances" affords every imaginable variety of climate except the tropical. Therefore, if as the great Montesquieu says, "the empire of climate is the most powerful of all empires," blessed is our region of the new northwest, for it possesses that desideratum. The temperatures of Florida and Maine, of Pennsylvania and California, have their prototypes here. The persimmon constitution will find its ideal in the peach and sweet potato belts of the low-lands and the man of sterner stuff, who wants a good frosty bracing atmosphere can revel in it in mid-summer a mile away.

Roses in Portland in December, pansies in Virginia City, Montana, in January, peach blossoms at Lewiston, Idaho, in February, snowbanks in sight of either in August. Side by side, blending into one matchless picture are summer and winter, Italy and Switzerland, "the dreamy Orient and the restless Occident."

THE OCEAN CURRENTS.

It is well known that a wide difference in temperature exists in corresponding latitudes on the Atlantic coasts of the United States and of Europe, and the cause has been well established. While along the eastern shores of our own country courses the Arctic ocean current, bearing down from the Northern sea its icy waters, the western countries of Europe are warmed by the mighty Gulf stream, which bears to their shores the thermal waters of the Tropical ocean.

The Columbia River region is in the same latitude as sunny France, Switzerland and portions of Italy, Spain and Portugal. It is subject to oceanic influences very similar to those of the countries mentioned, and necessarily has a somewhat similar climate. All this region is near enough to the Pacific ocean to be very markedly affected by its currents. By reference to any map whereon these ocean currents are shown, it will be seen that the great Japan current (Kuro Sivo)—that mighty stream of warm water—bears directly against the western shores of America. The temperature of the winds blowing over it is of course affected by its heat, and they carry their modifying influences inland many hundred miles, even exerting their genial influences upon the climate of Montana.

Cast your eyes over a climatic map exhibiting the extreme northern line of wheat production, for instance, and you will find that while on the eastern shore it touches near the mouth of the Saint Lawrence, at latitude 50°, it runs in the northwest 500 miles farther north and beyond the most northerly point in British America reached by the Columbia river. Over $1,000,000 have been invested in herds of cattle and horses during the past eighteen months, which herds are to sustain themselves without winter feeding on the great bunch grass plains of British America north of Montana, the experiment having been often successfully made by freighters who have turned out their oxen in that country poor from over-work in the fall and after leaving them to shift for themselves through the winter have gathered them up in good trim for work in the spring.

THE RECORD BY DISTRICTS.

The valleys of Montana, the coldest portion of this region, have an average annual temperature of 48°, about four degrees warmer than Wisconsin, three degrees warmer than Michigan, and one degree warmer than Massachusetts and New York. Montana averages 254 days of perfect sunshine per year, and *two hundred and ninety-one fair days* as against 191 fair days at Boston, and 170 at Buffalo and Chicago. Montana's fall of rain and melted snow is about 23 inches annually; five to seven inches less than that in Minnesota.

The average or mean annual temperature at Lewiston, in Northern Idaho, is 56°; a milder showing by five degrees than is made by Ohio, milder by ten degrees than Iowa, and milder by twelve degrees than Maine and New Hampshire. Boise City, in western central Idaho, with a much greater altitude than Lewiston, has an average temperature of 51°, the same as Ohio, and four degrees warmer than Connecticut. The rain and snowfall at Lewiston is about 24 inches; at Boise, about half that amount. Idaho is noted for its bright, sunny days and dry, pure atmosphere.

The average spring temperature of western Oregon is 52°; summer, 67°; autumn, 53°; winter, 39°, or 52.75° for the whole year. The thermometer seldom rises above 90° in the hottest days of the summer, and rarely falls below 20° in the winter; so that the most active out-door labor may be performed at all times of the year, and at all hours of the day. Considering the thermometer's limited range during the four seasons, and the other conditions peculiar to the locality, a year would more properly be divided into two seasons—the wet and the dry; the former lasting from the middle of November until May, during which period the rainfall is copious and regular, insuring certain crops and good pasturage. In the Williamette valley the annual rainfall is 44 inches—about the same as at Davenport, Memphis, and Philadelphia, while in all other valleys it is sufficient to prevent any drouth. The rain never comes in torrents, but gently and without atmospheric disturbance; thunder storms are rare.

The climate of Middle and Eastern Oregon differs in this from that of the western part of the State, that there is much less rainfall in the winter, and consequently more coldness in the latter, and more dryness in the summer. The rainfall, however, throughout the greater part of Eastern Oregon, is sufficient to insure large and remunerative crops. The range of the thermometer is rarely above the summer temperature of Western Oregon, sometimes reaching 100°, but only at rare intervals. Ordinarily the thermometer indicates 90° as about the highest summer temperature, and 10° as the lowest for winter.

The climate of the different divisions of Washington Territory (eastern and western) is nearly a duplicate of that in corresponding sections of Oregon. The range of mercury is a trifle lower, and in the Puget Sound section the rainfall is a little greater; but these differences are hardly perceptible.

If these facts prove anything they prove that the habitable portions of this whole northwestern region are singularly adapted, by virtue of their climates, to comfortable out-door work at all prominent industries the year round; that with soils of ordinary fertility the various cereals, fruits and vegetables can be grown over a vast extent of now unoccupied territory; that millions of cattle, horses and sheep can thrive without shelter or prepared food on almost unlimited natural pasturage; and, best of all, that this is one grand sanitarium—undisputably the

HEALTHIEST COUNTRY IN THE WORLD!

According to the official report of the Surgeon-General of the United States army, the percentage of deaths from disease to each 1,000 soldiers in the different military districts of the Union are as follows, the result having been the average of four years: Atlantic coast, out of each 1,000, the percentage of deaths was 17.83; Arizona, 12.11; Penn-

sylvania and Michigan, 6.05; the northwest, including Montana, Idaho, Oregon and Washington, 3.25. The Gulf states make a worse showing than the Atlantic states, and the northwest by far the best of all. The mortality statistics taken in connection with our national census, show a smaller death rate for Idaho and Oregon than for any other commonwealth in the Union, Idaho standing first with a percentage of 0.33, Oregon following with 0.69, and prominent eastern states following in this wise: Ohio, 1.11; Maine, 1.23; Illinois, 1.33; New York, 1.58; Missouri, 1.63; Massachusetts, 1.77; Louisiana, 2.00. Children born here are strong and sturdy, and the diseases incident to childhood rarely assume a malignant form. Endemic and epidemic diseases are almost unknown. There are no low, swampy lands east of the Cascade Mountains; malaria cannot exist, and fever and ague have no foothold. Consumption, that "dread disease which medicine never cured, riches never warded off, nor poverty could boast exemption from," which is the scourge and terror of New England and the east generally, is either here cured or modified so as to prolong life for many years.

Hurricanes, floods or other storms destructive of life and property are almost unknown in the history of this region. The growing season along the coast is accompanied with bounteous showers, whose absence in the interior is not felt because of the beneficent distribution of lands and streams suitable for irrigation. During harvest time there is rarely any rainfall; in fact such a catastrophe as loss of crops from drouth or flood would be considered phenomenal.

What a contrast to the oft repeated experience of the Mississippi and other eastern valleys! While I write, a flood covers the finest cotton, sugar and rice lands of the south. The overflowed area is estimated at 33,000,000 acres—nearly equal to the entire surface of the great state of Iowa. The amount realized there last year from the cotton crop alone was $20,000,000. It will require $10,000,000 to relieve the immediate necessities of the 500,000 inhabitants utterly destitute; many times that amount to make good their losses, and ages to blot from the memory of the rescued the awful scenes attendant upon the loss of human life. If the 400,000 sufferers, whom it is said must seek other lands and employment, could at a bound transfer their industry to this grand northwest they could, without fear of the elements, carve out a magnificent destiny, such as generations will not realize in that portion of the south.

Where the Harvest Shall Be.

THE drainage of the Columbia will soon be recognized as the granary of our Republic. In it are 50,000,000 acres of the finest wheat lands in the world. Figures are cold and dead when drawn upon to convey an idea of this stupendous truth. This area is nearly equal to the surface of England and Ireland combined, or Pennsylvania and Ohio. It would produce of wheat or its equivalent in one season 1,000,000,000 bushels at the low average of 20 bushels per acre, or if reckoned at the usual average of 30 bushels per acre, the production would figure up

1,500,000,000 BUSHELS!

more than three times the present total product of the United States.

The present annual consumption of wheat by the United States is 300,000,000 bushels; of France about the same and the remaining 900,000,000 bushels of the crop which the Columbia River region could produce would feed the entire present population of the German Empire and that of the United Kingdom of Great Britain. The ambitious statistician who desires to pursue this calculation further in this direction will find that it would require some new science in railroading to move one such crop on a single track before the next was harvested.

While several generations may pass away before these seemingly incredible results will be reached, it may be noted here that the region in question is only now confined to the comparatively insignificant production of 20,000,000 bushels per annum because of the lack of means to convey its product to market. In eastern Oregon and Washington and northern Idaho alone, some 40,000 tons of a single wheat crop (more than all the tonnage of the powerful young State of Colorado, when the first railroad reached its borders) has laid along the Columbia and Snake Rivers nearly a year for lack of boats to move it.

RAILWAYS AND MARKETS.

This want is happily being supplied by the Union Pacific Railway, one of whose arms (The Utah & Northern Branch) now stretches over 400 miles northward from the main line into the heart of the Clarke's Fork region, in Montana, while another (the Oregon Short Line) is being rapidly extended across southern Idaho, through the Lewis Fork or Snake River country, and is in 1883 to tap the still greater grain region of the Columbia, in eastern Oregon and Washington.

Wheat has been carried from California to St. Louis by rail and sold at a profit. The route is 2,600 miles long and the question naturally arises why will not an immense grain shipment from the Columbia River country to Chicago or St. Louis ensue upon the completion of the Union Pacific Oregon Short Line, by which the distances are as follows: Portland to Chicago, 2,290 miles; Walla Walla to Chicago, 2,118, and Boise City to Chicago, 1,809 miles. From these points to St. Louis the distance is in each case a trifle less than to Chicago. It costs less to raise wheat and other products in Oregon or Washington than it does in

California, and the northwestern farmer has a certainty of an annual crop, while the California farmer is happy if he can raise three crops in five years One prominent Walla Walla farmer tells me he can make a good living raising wheat at 50 cents per bushel ; can lay up money at 60 cents and grow rich at 85 cents per bushel.

A FARM FOR EVERYBODY.

Divided up into farms of say 200 acres each, our 50,000,000 acres of rich soil in the land "where rolls the Oregon," would give 250,000 farms and afford abundant employment for an exclusively agricultural population of at least 2,000,000. But if tilled, as it will be some day, by such a population as inhabits the Eastern States, it will give nearly 2,000,000 farms and afford employment for eight or ten million people ; or if tilled as lands are in France, where 5,000,000 of the total 5,500,000 different cultivated properties average less than six acres each this empire of the Northwest would sustain a farming community equal to nearly half the present population of our Union.

It is an old saying that he who pays rent, lends money to the poor house. I take it that every American has a higher ambition than renting his home or working for wages all through life. That ambition can never be gratified sooner anywhere through industrious and economical habits than on these 50,000,000 acres of our common footstool in the Northwest.

IN MONTANA.

There is still an area uncultivated in Montana equal to nearly 40,000 first-class farms of 160 acres each. The black sandy loam produces a crop of almost any of the cereals or vegetables about seventy-five per cent greater than the best bottom lands east of the Missouri. In a few instances crops of wheat have been raised on the hill lands without irrigation and having averaged from twenty-five to forty bushels to the acre are calling attention to these hitherto despised highlands. The 30,000 acres now in wheat average twenty-five bushels to the acre, but experience has demonstrated this standard can easily be raised. Occasionally there are yields that seem marvelous ; samples of wheat which went 100 bushels to the acre, barley 105, potatoes 613, have been exhibited at Helena, with the sworn statements of parties who measured the ground and crops.

Wheat can be raised in Montana at fifty cents a bushel and brings a net profit of $14 per acre. Oats yield a greater profit. Corn when raised brings about as much per acre as wheat, but it does not flourish on account of the cool nights. Potatoes will clear the producer from $75 to $90 per acre. In a fair year one man can clear from 160 acres of wheat alone $2,000.

The only trouble Montana farmers have had were the grasshoppers, though their devastations have never been so marked as in the prairie states and farmers agree that on account of the usual large yields and uniformly good prices they can afford to lose one crop out of three, which is far more than they have ever been called upon to do.

In the Yellowstone, Upper Missouri, Gallatin, Madison, Jefferson, Deer Lodge, Bitter Root, Judith, Musselshell and many other valleys of Montana lands are open to homestead and pre-emption or purchase from the Northern Pacific Railroad Company, at from $2.50 to $5 per acre—such lands as will, one year with another, yield the judicious owner larger returns than average lands in Eastern states now selling for $50 to $100 per acre. These valleys are now all easily accessible by the Union Pacific Railway. Irrigation is necessary in Montana and the southern half of Idaho, but that fact is an advantage, as the crops are not subject to the caprice of the weather, and the water brings with it enough mineral and organic matter to keep the land fertile, even though the same crop is raised upon it year after year, while the cost of irrigation is only about fifty cents an acre each season, hardly a fraction of the cost of artificial fertilizers considered essential at the east. One man can irrigate from sixty to eighty acres of grain.

FARMING IN IDAHO.

The newcomer who enters Idaho from the east or south, crosses scores of miles of territory apparently so barren and so utterly forbidding in every way that he must be possessed of a stout heart to be able to reconcile himself to rural life in "The Gem of the Mountains." It is indeed hard to imagine a more dreary picture in nature than he will here encounter in the thousands of square miles of sombre sage brush plain, unless imagination rests for a moment upon the parched deserts of Arizona, or the snow and ice brakes of some portion of the British possessions, to which dire extremes whole colonies of luckless immigrants have in recent years been carried.

But here in Idaho he will encounter what is impossible in the other regions named, a practical Eden at various stages of his journey. He will find here and there in the midst of these plains luxuriant crops, emerald or golden, trees blossom and perfume-laden, or bending to earth with their lavish fruitage. Boise City, fairly embowered in flower gardens and fruit orchards, and thousands of acres of land in different parts of the Territory from which are annually harvested a wider range of productions than any commonwealth in America, excepting California, can boast, were a few years ago just such dreary looking wastes as are many locations now to which I have already referred as the most fertile in our great land.

The Lewis Fork or Snake alone has more arable land along it in Idaho, (3,000,000 fertile acres) than is possessed by all Egypt, including the famed valley of the Nile. The latter valley, by the way, has been cultivated some 3,000 years by the aid of irrigation, and is still sufficiently fertile to be capable of furnishing millions with the staff of life. For untold ages it supported a population of nearly 8,000,000 souls. In the Teton Basin, near the head waters of the Snake, along the eastern Idaho boundary, are 800 square miles, or 500,000 virgin acres, whereon a colony of several hundred could find excellent homes. Also in eastern Idaho, now penetrated by two great railway lines (the

Utah & Northern and Oregon Short Line,) is the upper valley of the Snake, with its tributaries the Blackfoot, Portneuf, Salt River, and other valleys, where in one almost unbroken body are at least half a million acres of uncultivated land. Large irrigating canals have been constructed to cover these lands, rendering them available for cultivation at once.

Westward 25 miles at American Falls (where the Oregon Short Line crosses Snake river) commences a body of land as large as some of the New England states, which has been alluded to as follows by a prominent engineer of Idaho: "Suppose the Government, or, under a more liberal law, a body of capitalists were to construct a canal tapping Snake River at the American Falls. Between this initial point and the length of one hundred miles, there is an area of 1,500,000 acres of good land that would be reclaimed, and, as similar land has produced from 40 to 50 bushels to the acre, it will be fair to estimate the produce of this Snake River land at 30 bushels to the acre. This land, then, if sown to wheat—and wheat is the least valuable crop the farmer can raise—would give a total yield of at least 30,000,000 bushels, which, sold at 66.73 cents, would amount to $20,000,000 annually, and in the ratio of crops, perhaps to $30,000,000, and it is a fair question to consider whether a canal sufficiently large to convey water to irrigate this land would cost as much as $20,000,000. If the Government, in its wisdom, would construct such a canal as this, these, and more millions of acres of land, would become centers of rich and extensive farming communities, it would be repaid a hundred times in the ready sale of its lands, and indirectly to the Territory, by an increasing list of taxable property."

About 125 miles northwest of American Falls, lying just north of the Oregon Short Line, is Camas Prairie (named from a small, sweet, and nutritious bulbous root much prized for food by the Indians who in days gone by resorted there in large numbers.) It is some 80 miles long and 20 wide and contains 300,000 acres of lands as fertile as any under the sun. Experiments made here during the past year resulted in the ripening of superb crops of cereals and vegetables without irrigation. It is estimated that 500 families will settle on Camas Prairie this year.

Westward some 75 miles in the vicinity of Boise City, commences the gardenland of Idaho. It consists of arable sections of Snake, Boise, Weiser, Payette, Owyhee, Malheur and other valleys, aggregating at least 1,000,000 acres (of which not more than one-fourth are claimed) of lands which will produce all the varieties of cereals and vegetables which can be raised north of the cotton-growing line in the Atlantic states, and apples, pears, plums, peaches, grapes, nectarines, apricots, and many of the smaller fruits of the finest quality. Even tobacco and cotton have been grown in the lower valleys here.

Wheat yields an average of 30 bushels per acre; oats, 55 bushels; barley, 45 bushels, and other cereals, save corn, in proportion. Very little corn is produced on account of the cool nights in summer. Farmers who take special pains to secure the best results from given areas, often produce 50 bushels of wheat per acre, 70 of oats and 60 of barley, and I have noted exceptional yields far in excess of these figures. There has been no general failure of crops in the Boise valley *in the past seventeen years.* These lands are all along or within a day's ride of the Oregon Short Line, the early completion of which will greatly enhance their value.

The following is an official *resume* of agricultural productions to the acre, in bushels, of the States of the Rocky Mountain region, and of the east, in comparison with Idaho:

	Wheat.	Rye.	Oats.	Barley.	Potatoes.	Corn.
Idaho	30	25	55	40	250	35
Nevada . . .	12	.	31	.	95	30
California. .	17	15	30	23	114	34
East'n States	13	15	31	23	69	26

Following Snake River to the northern portion of the territory we find over a million acres of land open to settlement under the homestead and preemption laws, all of which has been surveyed. Not more than three thousand filings have thus far been made, so that Uncle Sam has a farm of 160 acres for 70,000 home-born or adopted sons to give away north of the Salmon River in Idaho. The new comer who prefers such conditions as surrounded him in the East will, in Northern Idaho, find vast areas of unclaimed territory where the rainfall is ample to insure the growth of all crops.

It is not unusual for immigrants to locate on wild land in Idaho valleys adjacent to mining regions, put up comfortable houses, good fences, etc., and pay for all such improvements with the first year's crop of potatoes or other vegetables taken from only a small portion of their farms. The facts that Idaho farmers were, as a rule, very poor when they embarked in business a few years ago, and that they are now generally well off and have fine buildings and the best implements, with often large herds of stock, are proof that this is a lucrative pursuit. I have never heard of the mortgaging of an Idaho farm.

Following is a list of the most prominent valleys of Idaho, with their arable dimensions estimated by the most competent authorities.

Name and location of valley.	Length Miles.	Breadth Miles.
South Fork Snake River, East'n Idaho	30	2 to 4
Salt River Valley, Eastern Idaho . .	20	1 to 2
Bear River Valley, Eastern Idaho . .	40	3 to 5
Snake Valley, North Fork, E. Idaho .	60	2 to 10
Blackfoot Valley, Eastern Idaho . . .	20	2 to 5
Round Valley, Eastern Idaho	30	8 to 12
Wood River Valley, Central Idaho . .	50	1 to 2
Camas Prairie, Central Idaho	80	18 to 25
Boise Valley, Western Idaho	60	2 to 6
Payette Valley, Western Idaho	75	2 to 15
Weiser Valley, Western Idaho	40	2 to 5
Lemhi Valley, North-Eastern Idaho .	70	3 to 6
Pah-Simari Valley, N. Eastern Idaho.	25	1 to 5
Northern Camas Prairie, N. Idaho . .	30	20 to 25
Potlach Valley, Northern Idaho . . .	25	10 to 15
Palouse Valley, Northern Idaho . . .	20	5 to 10
St. Joseph Valley, Northern Idaho . .	15	5 to 10

The valleys mentioned above are not all that are suitable for settlement. I could name over a score or more in addition, where the opportunities are fully as advantageous as in these. Although,

individually, the valleys are small, yet when taken collectively, the arable land contained in them would form a belt 5,000 miles long, with an average width of three miles—a belt that would stretch from Boston over our broad continent to San Francisco and part way back—an area of 15,000 square miles, or nearly 10,000,000 acres—twice the extent of the rich state of Massachusetts.

LANDS IN OREGON AND WASHINGTON.

But it is these commonwealths which afford the largest area of farming lands, the best conditions to warrant the production of heavy crops—without a failure for ages—and the climate of all others to enable the husbandman to work outdoors at something every month of the twelve. Said Senator O. P. Morton, after his tour of inspection a few years ago, "They will make homes for millions, and can almost feed the world." They are nearly as large as France, three times as large as old England, ten times as large as Switzerland, and about fourteen times the size of Holland. Were they settled as Switzerland, they would have about 24,000,000 of people; as France, about 33,000,000; as Holland, about 45,000,000, or as England at least 75,000,000—about 25,000,000 more than we now have in all of the United States. In their proportion of productive to waste lands, they will compare well with the average of the foreign countries named. In soil or in climatic or other conditions affecting the growth of crops, the comparison would be vastly in favor of Oregon and Washington. The truth is there is little land in that vast region that is not good for something, either adapted to wheat, barley, oats, hay, pasture, fruit, vegetables, timber, mining, or something else. There are those who claim there is no state in the Union where there is less waste land in proportion to the total area than in Oregon, and as remarked by an eminent traveler, "here Nature does not divide her rain and sunshine in two great halves, as she metes them out in California; here it rains and shines by turns, as smiles and tears alternate on those happy faces never distorted by immoderate laughter or drawn down by persistent grief." In many sections the grass is green the year round. The soil is black and rich as the mud of Egypt. The farmer can seed all the fall until Christmas, or all the spring from February to May, thus dispensing with much extra labor. Harvest is prolonged indefinitely—just as long as the grain will stand. Indeed, I have seen such enormous crops cared for by the comparatively few farmers that the singularly brilliant and beautiful moonlight nights of that northland were made to ring with the sound of the reaper or mower until the "wee sma' hours."

Hon. Philip Ritz, an intelligent pioneer farmer of Washington Territory, in a letter referring more generally to the great sea of rolling hills now covered with bunch grass, and known as the Plains of the Columbia, in eastern Oregon and Washington, says: "I have gone over this great body of wheat country in several directions, and have estimated it carefully by townships, by sections, and by acres, and, having left out a fair proportion for rough land suitable only for grazing purposes, and estimated the wheat yield at a low average for that country, I find the ultimate capacity of these great plains for the production of wheat to be fully 100,000,000 bushels per annum."

Said Hon. M. C. George, member of congress from Oregon, in a recent speech before that body: "Let me give you a single instance of rapid and surprising development, for such has been the order of things, especially in the supposed unproductive region of eastern Oregon and Washington. Ten years ago a certain tract of 2,300 acres near Walla Walla, now owned by Dr. Blalock, would scarcely have sold for ten cents per acre. This year its average yield of wheat was 35 bushels per acre, and on 1,000 acres of it 50,000 bushels were raised. Samuel Edwards, on land near by, harvested an average of 71¼ bushels per acre from 30 acres. But a few years ago the wheat product of Oregon was put down by statisticians under the head of 'miscellaneous.' In 1880 the census revealed our state as ahead of twenty-one others, and standing seventeenth on the list of states in quantity and first in quality, and yet it to-day is but in its infancy in this industry."

W. S. Gilman, near Walla Walla, last season harvested 52 bushels of wheat per acre from a field of 120 acres, and a neighbor, C. M. Patterson, harvested 47 bushels per acre from 80 acres of "sod-land," or raw land on which wheat was sown for the first time and the sod turned over upon it. A Mr. Foster owns a field of 60 acres near Walla Walla which has produced a grain crop every year for sixteen years, and the average yield has never been less than 55 bushels per acre. He has never used fertilizers of any kind. However, estimating on the basis of a fair average yield—35 bushels per acre, about two-thirds of the best yield noted above—wheat-raising on the Columbia plains at the present low prices is a good business. With the Oregon Short Line and Northern Pacific completed to this region in 1883 a market at better figures will change the result materially. The table given below explains the profits to be obtained now by careful cultivation, from a quarter section of wheat. The table is based on actual results.

EXPENSES:

Fall plowing, 160 acres @ $2	$320
Seed wheat, 1½ bushels per acre, at 45 cts	108
Sowing and Harrowing, at 75 cts	120
Harvesting, at $2 per acre	320
Threshing and hauling, $2.50 per acre	400
Total cost	$1,268

or $7.92½ per acre.

RECEIPTS:

5,600 bushels of wheat, at 45 cts per bushel	$2,520
Less cost	$1,268
	$1,252

A profit of $7.80 per acre—a sum sufficient to purchase more than three times the amount of land that produced it, at government or railroad prices. There are still 60,000 farms of 160 acres each in the eastern Oregon and Washington country awaiting claimants and cultivation. Of course every county in Oregon and Washington has land yet held by Uncle Sam and subject to the usual homestead and pre-emption laws. There is an

abundance of railroad land in both commonwealths now selling at from $2 to $5 per acre. Lands held by individuals are worth from $2.50 to $50 per acre, varying with their location and improvements.

In western Oregon and Washington valley lands preponderate, and here, in western Oregon, is the gem, the *emerald* of the Pacific coast. It is the Williamette valley, of which Hon. Samuel Bowles once wrote: "Never beheld I a more fascinating theatre for rural homes; never seemed more fitly united natural beauty and practical comfort; fertility of soils and variety of surface and production; never were my bucolic instincts more deply stirred than in this first outlook upon the Williamette valley." It is about 150 miles long and 50 wide, containing 100,000 inhabitants — about half the present population of Oregon—and if settled as is Merrimac valley, it would have 1,076,000, or as the valley of the Delaware, it would have 2,000,000. It will produce anything a reasonable farmer would ask, and *there has been no failure of crops* in it since the first settlement of the country some forty years ago. There is not any great amount of good agricultural land to be secured in this valley under the homestead and pre-emption acts, but considerable is yet for sale at from $5 to $10 per acre for wild lands or $15 to $40 for improved.

In the following valleys, however, are thousands —yes, millions in the aggregate—of fertile acres to be had for the taking. These Oregon and Washington valleys have in addition to their agricultural resources, some very picturesque names. Among them are the following: The Columbia Valley, from the mouth of the river 260 miles east, forms the boundary of Oregon and Washington, and the strip of valley land on both sides varies from two miles to thirty in width, or an average, perhaps, of ten miles. The Columbia, from that point where it turns north, runs through Washington Territory three hundred miles, and the valley has an average width of 80 miles. Walla Walla, 30 miles long and 18 miles wide; Touchet, 40 miles long and 5 wide; Alpowa, 14 miles long and 3 wide; Palouse, 100 miles long and 25 wide; Yakama, 100 miles long and 20 wide; Spokane, 60 miles long and 10 wide; Josephine, 25 miles long and 4 wide; Klamath, 50 miles long and 15 wide; John Day, 50 miles long and 10 wide; Willow Creek, 30 miles long and 8 wide; Birch Creek, 20 miles long and 6 wide; Umatilla, 30 miles long and 35 wide: Pine Creek, 10 miles long and 15 wide; Grande Ronde, 20 miles long and 16 wide; Powder River, 10 miles long and 5 wide; Jordan River, 15 miles long and 5 wide; Burnt River, 8 miles long and 5 wide; Snake, 100 miles long and 10 wide; Chehalis, 60 miles long and 20 wide; Cowlitz, 50 miles long and 5 wide; Nesqually, 15 miles long and 2 wide; Puyallup, 20 miles long and 3 wide; Duwamish and White, 40 miles long and 8 wide; Snohomish and Snoqualmie, 40 miles long and 3 wide; Stilliguamish, 15 miles long and 3 wide; Skagit, 60 miles long and 3 wide; and the Nootsack, 30 miles long and 3 wide. In addition to these are many other valleys, with streams, as the Okanagan, Klickitat, Lewis, Willopah, Quilleute, Samish, Yamhill, Umpquah, Deschutes, Rogue River, etc., containing hundreds of thousands of acres of land no less fertile and valuable than in those detailed.

DIVERSITY IS CERTAINTY.

No better opportunity could be desired for the intelligent investment of small capital than in market gardening, in the mountain valleys of the northwest, as everything brings extraordinarily high prices, and the supply does not fill the demand. All root crops are perfectly at home in any portion of this region, the potato especially growing to great size, and being of the best quality. Specimens were exhibited to me in various valleys of Irish potatoes weighing 2 to 4 pounds each, turnips, 30 pounds, and rutabagas, 15 to 20 pounds. All such vegetables, in fact, as beets, peas, beans, tomatoes, cucumbers, rhubarb, onions, etc., are successfully and profitably cultivated, the crop is enormous, the quality good, and the market for all that is not needed at home is sure and at paying prices. Nearly every farmer has his garden well stocked with all kinds of vegetables. Cabbages average twelve pounds to the head; and sweet corn, sorghum, lettuce, melons, radishes, egg-plant, etc., are noticeably thrifty and superior. The average yields per acre of various products in Oregon and Washington, not mentioned above, are tabulated by good authority as follows: Peas, 40 bushels; Beans, 36 bushels; Potatoes, 400 bushels; Sweet Potatoes, 200 bushels; Turnips, 300 bushels; Carrots, 100 bushels; Parsnips, 800 bushels; Hay, 2½ tons; Cabbages, 20,000 pounds.

In Montana and Idaho potatoes sell at $1 to $3 per 100 pounds—sometimes in mining camps much higher—and other vegetables in proportion. Take here, in connection with grain raising, the production of poultry, eggs, butter, pork, vegetables and similar items now almost unnoticed as "not worth bothering about," and the industrious and frugal farmer and housewife, managing as of necessity do those in the thickly settled states, should soon make themselves independent. It is often almost impossible in the winter to secure fresh eggs at 75 cents per dozen in Montana cities, and during the past winter we have seen $1 freely offered at Helena and Butte. Butter ranged from 40 to 60 cents the entire winter, and it was frequently impossible to secure a good article.

The constant increase in the magnitude of railway, mining and other operations in all parts of the Territory justifies the belief that any considerable surplus of produce cannot be raised in the mountain districts for years to come, and until that time prices must remain from 50 to 100 per cent. higher than in the "states." Again, agricultural land is usually so beneficently interspersed with the great mineral belts that the market will be at hand, and the miner accommodated as well as the farmer. This reminds me that in Pocahontas Valley, near Baker City, eastern Oregon, there is a 160-acre homestead from one end of which 50 bushels of wheat per acre was harvested last season, while from a gulch at the other end gold was being mined to the extent of 50 cents per pan!

The New Fruit Land.

"For richest and best
Is the wine of the West,
That grows by the Beautiful River."

THE Northwest (including Idaho, Oregon and Washington) is a very Eden for fruits. Apples, peaches, pears, nectarines, apricots, plums, prunes, grapes, cherries, strawberries, currants, and all other small fruits are produced in the greatest abundance, and of a quality unsurpassed. The sage brush lands of Idaho, naturally the very emblem of sterility and desolation, are in a few years turned into the finest fruit farms, with less trouble than would attend a similar transformation on the wild prairies of Iowa or Nebraska. A prominent fruit grower estimates that 20,000 large fruit trees have been set out annually for the past five years in the valleys surrounding Boise. Several of the orchards in this locality produce from 25,000 to 40,000 bushels of fruit each annually, there having been but one failure in the crop for ten years.

John Krall, in the suburbs of Boise, has 125 acres in fruits (20,000 trees), embracing all the varieties known in this latitude. His production last season was 500,000 pounds, He finds no fruit insects yet, and pears are never troubled with blight or other diseases. His market is mainly in the mining camps, and his fruit commands from five to twelve cents a pound. Thos. Davis, also near Boise, has a seventy-five-acre orchard (10,000 trees). His orchard has failed to produce *but once in the last ten years*, and his last season's crop of 40,000 bushels of large fruits and 500 bushels of berries, must have returned him a snug little fortune alone. His orchard is seventeen years old, and not a tree in it looks like decaying. He irrigated the first four or five years, but has not found it necessary since. Mr. Davis has extensive fruit drying apparatus, and a cider and vinegar factory, in which he works up vast quantities of fruit annually. Another firm dries 30,000 to 40,000 pounds of fruit annually, and the interest bids fair to grow until at least the demand of Idaho and adjacent territory is supplied. Gen. L. F. Cartee, ex-Surveyor-General of Idaho, has forty varieties of grapes in his vineyard, none of which have ever failed to bear a full crop, save the Catawba.

The fourth year's growth of apple trees in Boise Valley has yielded 200 pounds; of cherries, 75 pounds; of peaches, 150 pounds; of pears, 130 pounds; of plums, 150 pounds; while small fruits, such as strawberries, currants, gooseberries, blackberries and raspberries are very prolific. The growth of wood made by fruit trees, and the quantity of fruit often found loading the branches is almost incredible. John Lamb, in Boise City, has black locust trees on which I was shown limbs that had grown from twelve to fifteen feet in one season, and plum, peach and apple trees two years from the graft, full of fruit.

No finer fruit, of the kinds raised there, is produced in any quarter of the world than in Oregon and Washington, Fruit trees grow from six to eight feet the first year, and bear fruit the second, third, and fourth years, according to variety. They thrive in the valleys as well as on the foot-hills, and up to a considerable height in the mountains, but especially in sheltered, dry soil. At recent fairs, yearling prune, peach and plum trees, eight feet four inches high, and yearling cherry-trees seven feet high, were exhibited. Apples, pears, peaches, grapes, cherries, and the various small fruits, for size, beauty and excellence of flavor not excelled on the globe, are grown in the orchards of that region. Pears blossom along Puget Sound in February and March; harvest apples ripen in July.

Oregon and Washington now gather from their loaded branches about 3,000,000 bushels per year, with tons upon tons of other fruits. Immense drying and canning establishments are being started to convert the fruitage into exporting shape. Upon completion of the Oregon Short Line we will see car-loads of these delicious products shipped eastward in various forms, and the man who has a good orchard at the close of 1883 will have his competency assured. We are now importing millions of pounds of dried fruits (especially prunes) from Europe annually, and there is no danger of overdoing this business. There is a grand field in this country for vineyards and wine-making.

The Ranch and Dairy.

OUR beef supply does not keep pace with the rapid increase of our population. Since 1860 thirty states and territories show a decrease in cattle in comparison with the population. A prominent writer on live stock says that if cattle breeding in the United States was stopped for five years, our 28,000,000 cattle would all be consumed. Our exports to Europe have quadrupled in the last two years, and for the first period since the flush "war times" a fair steak costs our city cousins in Chicago 25 cents per pound. While I write come dispatches from that and other cities that laboring men are compelled to deny themselves the luxury of beef. There don't seem to be any reason why such an alarming state of affairs should continue long, if our consumption could be confined to this country, but affairs are in still worse shape on the other side of the water. While the limit of production for many localities has been reached, population increases very rapidly.

We have commenced dividing our good things with the hordes of Europe, and their portion will grow constantly and rapidly larger. Though rough on the consumer, this is certainly a favorable outlook for the cattle grower. Not entirely dissimilar is the sheep-raising industry, for we import as high as $57,000,000 worth of wool and woolens in a single year.

We have over 1,000,000 square miles of pasture lands in the United States, with a total of about 125,000,000 head of live stock. West of the Missouri we have 1,000,000,000 acres of land, on much of which cattle, sheep and horses can be grazed as well as anywhere on the globe. Of this enormous tract that magnificent block of 60,000,000 acres in the region drained by the Columbia and its tributaries is the best and the least utilized. The possibilities of such a pasture field are almost beyond calculation, and we can only begin to realize its value by comparison with grazing regions of the East. This area is about two and a half times greater than the entire state of Ohio, where, notwithstanding the large proportion of lands devoted to other interests than stock-raising, there are over 10,000,000 head of live stock. The small portion of New York State devoted to pasturage (probably one-fourth, or say 7,500,000 acres) furnishes grass for nearly 8,000,000 cattle, horses and sheep, valued at $600,000,000. Granting that some of our upland pastures in the west will not produce as much beef or mutton as the cultivated pastures of the East, yet the Columbia Basin, according to the best authorities, should easily graze 5,000,000 cattle and 10,000,000 sheep, and could, when its herds have reached these numbers, market at least 650,000 cattle, 1,500,000 sheep, and 50,000,000 pounds of wool annually. At present it contains a sprinkling of about 850,000 cattle and 2,000,000 sheep. I have rode for hours at a time in that region over the finest bunch grass lands the sun shines on, without seeing an animal, or a trace of one. In fact, as will be seen by the above figures, if the lands were allotted "In severalty," every domestic animal in that country would have a pasture field of about twenty acres.

Cattle and horses browse from Christmas to Christmas, and roam in their fatness the year round upon these carpets of luxuriant bunch grass, beside which clover, blue-grass and the far-famed mesquite of Texas sink into insignificance. Hon. Z. L. White, long Corresponding Editor of the New York *Tribune*, says: "Montana is the best grazing country in the world." Hon. R. W. Raymond, United States Commissioner of Mining Statistics, who has traveled extensively in the northwest, says on this subject: "To be more exact I might say that to pasture a horse on bunch grass is like *giving him plenty of good hay, with regular and liberal feeds of grain.*"

For a dozen years previous to last winter the average loss of cattle or sheep from storms was reckoned at not over two per cent per annum. Last year the percentage was increased to an average throughout the country of ten or twelve per cent. Of the thousands of head of oxen which are worked hard by different freighting companies from May until December, and are then turned out poor to forage for themselves until their work again commences in the spring, none have ever tasted hay or grain. These generally "come up smiling" in good condition for work. This experience has been entirely successful in the British Possessions, 150 to 400 miles north of Montana and Idaho.

The expense of caring for cattle or horses in herds of 1,000 or more is about 75 cents per head. Adding taxes and we have the total cost of producing a $30 steer in the northwest about $3.50. Men who five to ten years ago engaged in the business on a small capital find themselves rich. The consequence is that many business men in Helena, Boise City, Walla Walla, and other towns are putting money into cattle, sheep or horses. All figure on a profit of from 25 to 35 per cent per annum on cattle or horses and 40 per cent on sheep. Stock cattle, all ages and sexes, sell in Montana and Idaho at an average of $18.50 per head, or in Oregon and Washington at $12.50. Until the country is thoroughly stocked, which will be several years yet, no money is needed for a ranch. Improvements generally consist of rough log huts and corrals, which for say 1,000 head of cattle, need not cost over $250 if the owner relies largely on his own muscle. The additional expense is the cost of living, if the owner does his own herding, and this will vary from $250 to $400 a year. If a herder is employed he receives about $35 per month and board.

I have numerous statements of stockmen who commenced four or five years ago with from 100 to 200 cows, whose herds are now worth $8,000 to $15,000 each, and of "capitalists" who show a profit of $45,000 to $60,000, from investments of $20,000 and $25,000 five and six years ago. Probably the most successful of Montana's cattle men is Con Kohrs, of Deer Lodge, who commenced on a small capital some twelve years ago. He paid $50 per head for breeding cows, and to enlarge his business from time to time since he has often borrowed money at 2 per cent per month interest. He now owns some 12,000 head and he markets $40,000 worth of beeves annually. A young man without capital five years ago agreed to care for the herd of D. G. Flurry, Sun River Valley, for one-fifth of the increase. He can now get $25,000 for his share, or $5,000 per year for his work.

Thousands of square miles of bunch grass lands are still unoccupied, notably in northern Montana, bordering the Missouri, Sun, Marias, Teton and Milk rivers, and in central and eastern Montana in the Musselshell, Judith, Yellowstone, Powder, Tongue, and Big Horn river regions.

Almost without exception those who have engaged in stockraising in Idaho have either become rich or are in a fair way to do so quickly. I am well acquainted with a prominent stockgrower in Lemhi Valley who invested $11,000 in cattle in 1870. A year or two later he added $9,000 to his investment, mainly buying cows at the then high price of $40 per head. Up to the close of 1880 he

had sold enough of the increase to get back the $20,000 invested, as well as to pay all the expense of carrying on his business for the ten years, and he has over $100,000 worth of cattle left. His loss last year was only one per cent, and it has averaged less than three per cent for years at a stretch. Lorenzo Falls, in Pah-Simarl Valley, Idaho, has been in the business twelve years, and says he does not think he has lost an animal on account of bad weather or lack of natural feed in all that time. He now owns 700 head. E. R. Hawley, who has 2,000 head of cattle ranging in Salmon and Lemhi valleys, has had no loss to exceed two or three per cent. Some 25,000 head, feeding in eastern Idaho, never see shelter or prepared food and are doing well. There is still room for many herds in eastern Idaho, within easy reach of the Utah & Northern Branch of the Union Pacific, especially in the Teton region and along the Snake.

In Owyhee and Ada counties, western Idaho, and all along the Snake for 400 miles, in sight of the Oregon Short Line, as well as in northern Idaho and eastern Oregon and Washington, are vast and only partially occupied cattle ranges, where the fortunate few who are established, are on a sure and short road to fortune. The largest herds run up to 5,000, while probably two-thirds of all the cattle in the territory are divided up into herds not exceeding 500 head.

MUTTON AND WOOL.

We could, in the new Northwest, grow all the wool needed to clothe a nation. To grow it would enrich thousands of husbandmen, and to manufacture it would build up dozens of important cities. Rheims began in 1801 the manufacture of merino, and now has some 60,000 workmen running 200,000 spindles. Bradford, where the great English worsted works are located, has grown from 14,000 to 100,000 as a direct result of establishing the factories in question.

As already noted, the profits of wool-growing are by many placed higher than in cattle-growing. All agree that the wool-clip will pay every item of expense, leaving the increase a clear gain. The annual increase of 1,000 ewes two years old and upwards will range from 85 to 115 per cent, while the increase of flocks of all ages and sexes is placed at 48 per cent. The loss from all causes is estimated by a majority of the prominent breeders with whom I have conversed at 2 to 8 per cent.

Flocks are sheltered in winter, but few receive any feed other than that gathered by themselves. Messrs. Cook Bros., of Smith River Valley, sixty-five miles east of Helena, who own 25,000 head of high grade Merino and Cotswold sheep, put up hay for five successive seasons to guard against storms, but only fed their flocks a few days during average seasons.

While Montana has made excellent progress in this industry, (increasing her flocks from 10,000 head in 1873 to 400,000 in 1881,) Idaho has been so generally given over to cattle that wool-growing receives but little attention, although the climate and grasses are favorable to the production of the best mutton and finest grades of wool. Owyhee county probably contains the largest flocks, there being some 40,000 head in that county alone. There is but little winter feeding, and the wool-clip is supposed to pay all expenses, leaving the increase clear profit. Robert Noble, whose flocks range near the Oregon Short Line, in the county named, was nine years ago working for $30 per month. He invested a few years' wages in sheep, and is now accounted worth $30,000 to $40,000.

Sheep raising is emphatically the poor man's industry, for, with a free range, timber at hand for shade and corrals, and in fact no capital needed for running expenses after the first season, he is master of the situation if he can command any sum from $500 upwards for the purchase of a small flock. Better still is the plan of leasing flocks, by which the trusty workingman without a dollar can secure a flock of from 1,000 to 2,000 head for, say, five years, giving the owner one-half the increase and wool, and returning the original number of sheep at the termination of the lease. Many a poor man has become wealthy by starting in the business this way.

Horses, more hardy than either sheep or cattle, because they will paw away the deepest snows that may cover their pasturage, are also being introduced in large numbers, despite the large amount of capital required for a respectable start. The average increase of colts is 80 per cent of the mares. No hay or grain is usually fed except to the thoroughbred leaders of the herds, of which there are now quite a large showing. An authority on such matters estimates that there is room for 200,000 head of horses in Yellowstone Valley alone, where this industry seems to be taking the lead.

THE DAIRY.

A thousand dairymen are needed right now in the region tributary to the Utah & Northern Branch of the Union Pacific, the Northern Pacific and Oregon Short Line. There are probably more and better openings for dairying in that country than for any other branch of rural industry. The cattle king, with his thousands of cows, often either buys his butter or does without, and the denizens of cities, towns and mining camps now look for the butter famine as regularly as winter comes. Just now a prime article of ranch butter is worth from 40 to 75 cents per pound, and it will average 35 or 40 the year round. Climate, pasturage and water combine to render dairying there a very satisfactory pursuit. Cows cost not a cent for their keep, and the product of butter or cheese is a clear gain, the increase in stock paying all expenses. Good dairy cows can be purchased at $25 to $35 per head,

In the center of the best grazing region in the world, with a superior climate, an abundance of clear cold running water, and whole "counties of grass" to be had for the taking, Helena, Butte, Boise, and other Idaho and Montana cities send to other states for hundreds of thousands of pounds of butter and cheese annually. Haste the day when this grand region will be supplying its own demand, and sending its car-loads of butter

and cheese east by express daily. What an advantage the dairyman of the West will have over his brother of the East. He can graze his cows on lands that cost him nothing, winter them at a cost of not to exceed $2 per head, and make and keep his butter and cheese in nice shape without the use of ice, while the dairyman of the East has $5,000 to $10,000 invested in every 100 acres of his pasture, expends $20 on every cow for winter keep, and suffers more or less annoyance and expense on account of the hot days and nights of his busiest season.

The Mineral Belts.

ABOUT the headwaters of the Columbia—but yesterday, it seems, a vast *incognita* infested by savages—are clustered gold and silver veins as well as those of the baser metals, whose number so soon found taxes our belief, whose extent is phenomenal, and whose richness shows no parallel in mining history. It is a mineral region which alone, if rightly utilized, could give employment to a nation of miners, and enrich great commonwealths. It is the new hope of the mining industry of America.

Of the $2,000,000,000 in gold and silver added to the permanent wealth of the world by the United States since 1850, that portion of the Northwest covered by these pages has contributed about $325,000,000. To secure this result but a handful of miners, working under the most disadvantageous circumstances, have little more than scratched the surface of a mere fraction of this royal metal kingdom. From Yellowstone Park on the east to the Coast range on the west, 700 miles, and from the headwaters of the Owyhee River, in Nevada, on the south, to those of the Kootenai in the British Possessions, on the north, 800 miles, is a succession of extensive districts rich in gold, silver, copper, iron, coal, lead, sulphur, salt, and other minerals. The metalliferous fields of other nations are but pigmies compared to this. About the headwaters of the Columbia are gold and silver veins in proportion so prodigious and in utility so richly endowed that they have in less than a score of years, while the region was yet a wilderness, unconquered by railways, yielded $250,000,000. This is from a mere fragment of the mineral field of the Northwest. The richest gold field of its size ever discovered in the world is the famous Alder Gulch, western Montana, where day after day men have made $200 each by simple panning and sluicing, and where in a section two or three miles long by a few rods wide, an average of $8,000,000 per year was taken for six or seven years. The total product of that little patch since 1863, is variously estimated at from $60,000,000 to $70,000,000. Not far away is Montana Bar, from which $1,000 in gold has been taken from a single pan of dirt. It is half a mile long and 200 to 300 feet wide. Each 100 feet of this half mile has "panned out" more than $100,000 and the novel spectacle of four-horse wagon loads of gold leaving camp, with a batallion of armed men as a guard, has been witnessed there more than once. While these gulches are being rapidly exhausted they tell the story plainly of the stupendous wealth of surrounding quartz veins from which came their golden sands and nuggets, and which promise a lavish yield for centuries.

Helena and Butte, Montana, are rapidly advancing to the front, as among the few great mining centers of the world. The former is built on a golden foundation—a gold field that has yielded richly for years—and the very brick used in the stately business blocks and residences show by assay an important percentage of the precious metal. It is surrounded by thousands of square miles of mountain ranges, whose interiors are honeycombed with gold and silver quartz veins, whose wealth two years ago was not dreamed of. Butte, the silver queen of all the Northwest, is built upon ground through which are traced silver veins, large and rich as any in Colorado, and is shaded by mountains in which 3,000 men are now delving for the wealth they know lies there. A district here only three miles square is yielding $3,000,000 in silver and copper annually, and will soon double that yield.

Westward and northward, along Clarke's Fork, stretch gold and silver districts for hundreds of miles—a metal belt, indeed, which has been traced to the shores of Alaska, 1,500 miles away—which will afford a dazzling field for mining enterprise long after our present population shall have vanished.

But it is along Lewis Fork, or the Snake, that Nature with most prodigal hand has strewn riches which shall soon astonish the world. Indeed the wealth already laid bare would, if shown in smaller fields, like Colorado or Arizona, excite mining circles in both hemispheres as they were never excited before. The bed of Snake river and its contiguous bars constitute one vast gold placer mining field, stretching from where they are crossed by the Utah and Northern Branch of the Union Pacific Railway in eastern Idaho, to the main Columbia, 1,000 miles to the northwest. Bright fine gold is found almost everywhere. Its extreme fineness has alone baffled the skill of the many miners who have sought fortune there. Ordinary methods of saving it have generally proved faulty, until, by a recent invention, copper plates, electro-plated with silver, have proved just the thing. These simple and economical machines are now being strung along Snake River for hundreds of miles, and many companies are taking out handsome fortunes in "flour gold." There is room here for the enterprise of all the placer miners of our Union, and the time will doubtless

soon come when the golden product of the Snake river mines will be run well up in the millions annually. It is believed that the source of all this gold has been found in the mammoth quartz mines of the Cariboo District, eastern Idaho, a short distance north of the Oregon Short Line. If so, a mining center will soon be founded there which should throw into the shade even far-famed Alder Gulch or Montana Bar.

About the headwaters of Salmon, Boise and Wood rivers, in southern-central Idaho, is a region some 25,000 square miles in extent, whose early history borders upon the marvelous. Until three years ago its nearest railway was from 250 to 300 miles distant from the leading mines and the country was practically unknown. Since then it has had the Utah & Northern Branch within 150 miles, and has managed to attract some attention in spite of the Leadville, Gunnison and Arizona stampedes. The Oregon Short Line will go to the heart of it the coming summer, and the thousands of miners and others who make a pilgrimage in Pullman cars that way will have something of a surprise. They will find of local note at Atlanta, the Atlanta ledge, which, traced for miles on the surface, is 50 to 100 feet wide, and has shipped (by wagon 300 and rail 1,100 miles) a thousand tons (a small portion of its product) to Omaha, where $700,000 were extracted from it; also, at Bonanza City, the Custer ledge, the giant among American mines, from whose unparalleled outcrop of 200 feet above the surface four men during eleven months of last year quarried ore which yielded $1,000,000, and which has, through a small 20-stamp mill, poured out $1,400,000 in the last fourteen months; they will find at Idaho City a small area of the placer ground of one county which has produced $20,000,000 in gold—more than a million a year for eighteen years—and other larger areas which in years to come will often duplicate Idaho's total past placer yield of $65,000,000. Silver City, Idaho, they will discover, is the home of the famous Elmore, which, with a small 20-stamp mill, in thirty days has poured out $500,000—the largest month's yield, I believe, of one mine with a mill of this limited capacity yet recorded in the world. Among the other tens of thousands of quartz veins already found is the Morning Star, whose shipment of 100 tons from Silver City to the Atlantic seaboard, containing $100,000, is fresh in the minds of at least the owners. A near neighbor of the Morning Star, in trying to duplicate this out-put fell only $10,000 short, and added another brilliant achievement to those in mining history by yielding $4,000,000—$1,000,000 for each 100 feet of its 400 feet of depth—in a comparatively brief period. Along the Yankee Fork of Salmon River they will perchance gaze in wonder at the Charles Dickens, whose great ore-body is so rich that two men have pounded $11,500 out of it in hand mortars in a single month, or the Montana mine, where five men extracted $80,000 last year in eight months, and shipped ore in 20-ton lots worth $3,000 per ton. They will be shown thousands of pounds of ore from these mines glittering with the native gold, and worth $5 per pound. These things come like a revelation from a region much of which is still marked unexplored country on some of our maps.

WOOD RIVER AND SAWTOOTH.

So much is being asked about these districts now days that I will briefly describe them here. The Wood River and Sawtooth region is in southern central Idaho, about 275 miles northwest of Ogden, Utah, and 128 miles west of Blackfoot, (Utah and Northern Branch Union Pacific Railway), from which it is reached by daily stage. Wood River is a clear, strong current 150 feet wide and from three to four feet deep. Dozens of branches enter it from the east and west, along which are grouped the mining districts which are so rapidly making it famous. These districts are reached by easy grades, and rise from an elevation of 5,209 feet at Bellevue to between 8,000 and 9,000 feet at Galena, a distance of 45 miles. The formation insures permanency of many fissure veins already discovered, and the uniform richness of the ore is without parallel in mining history. The silver belt is 20 to 50 miles in width, and 130 to 140 miles in length. The Wood River ores are mainly galena and carbonates, 60 to 80 per cent lead, with some antimony and copper, yielding $100 to $400 silver per ton. Very rich gold ores also occur in some of the mines. The Sawtooth mines have large veins of milling ores, carrying silver and gold. Among the leading mines are the Mayflower, which during the past season has shipped 1,000 tons of ore yielding 175 ounces of silver per ton and 70 per cent lead, and has recently been sold for $400,000; the Idahoan, which produced $200,000 during 1881; the Bullion, which, with only a part of the season's work, yielded $100,000, and with its splendid new machinery is in shape to take that out monthly; the West Fork, which with several other claims was sold by the discoverers to a Philadelphia company for $16,000, and from which one man then extracted 300 tons of ore worth $50,000 in 20 days; the Vienna, which has shipped ore in large lots worth $300 per ton; the Pilgrim, Solace, Mountain King, Columbia and several others, which are yielding large quantities of ore worth $200 to $500 per ton. The total production of Wood river mines during 1881 was over $1,100,000. The ore shipped averaged over 150 ounces silver per ton, and 70 per cent lead. The mines of this marvelous region have paid for their development and yielded a revenue from the start. A mine in the Wood river region is cash in hand to its owner, whenever he is ready to sell. Three smelters have been built and others are in progress. It is estimated that at least 20,000 tons of ore and bullion will be shipped this year.

This entire Wood river and Sawtooth country will be accessible by rail during the coming summer. The Union Pacific Company is extending its Oregon Short Line from Granger, Wyoming, northwestwardly through Idaho and the track will, in all probability, reach Wood river 40 miles below the mines in June or July, and the most promising camps will be reached a month or two later.

In Western and Northern Idaho and in Eastern Oregon and Washington are dozens of extensive districts promising very well, but of which little can be said, because of their slight development. Few quartz mines are rich enough to pay for working to any great depth so long as they are 500 miles from rail or water transportation. The mineral belt along the Blue Mountain Range in Eastern Oregon, of which Baker City is the center, is about 100 miles long from east to west and varies in width from 20 to 35 miles and embraces both placer and quartz mines. The Virtue mine near Baker City has yielded $2,000,000, some of its quartz running $10,000 to the ton. The famous Connor Creek gold mine is 45 miles from Baker City. Within a radius of 40 miles from the same place are the Rye Valley, Monument, and Cable lode silver mines, all rich fissure veins, and surrounded by others. The gulches of Baker County yield nearly $1,000,000 per year, and have maintained that yield for some twenty years. There is a vast area of rich placer ground there worthy the attention of capital.

There is a wonderful future in store for this great region as a bullion producer. There is an immediately brilliant future for hundreds of mining men, who can take a reasonable amount of capital there to develop poorly worked claims, and for thousands of experienced prospectors whose only capital consists of pick, shovel, and a summer's "grub stake." In fact, the names of the mineral veins is legion, and unnumbered thousands are yet to be discovered.

Sufficient development has been made to demonstrate the fact that this is the richest and most extensive mineral belt ever found, with tens of thousands of square miles of the rugged Salmon river, Cœur d' Alene, Wasatch and Bitter Root mountain ranges which white man's foot has never trod, yet to be heard from. Nature has done as much for this country as for any on earth. It contains every element desired to build up several of the richest mining communities in the world, and has only lacked the present gratifying advance of the iron horse. Its climate is mild and conducive to economical mining operations the year round. Its smelting facilities of fuel, lime, water, and all varieties and grades of ore are unexcelled.

IRON, COAL, COPPER, SALT, ETC.

Alternating with the precious metals are valuable coal and iron deposits, which will soon be utilized in smelting works, forges and rolling mills, to make radiant the night, and furnish the iron bands that shall join the producers of the valleys with the armies of consumers in the mountains. Bituminous coal, iron and copper abound in nearly every county in Montana. Copper is found in immense deposits, assaying from 20 to 50 per cent pure. There is an iron mountain in Deer Lodge county, three or four times larger than the celebrated iron mountain in Missouri. Coal beds lie within three miles. There are 60,000 square miles of coal lands in Montana—enough to cover the whole surface of Pennsylvania, and extend well over on the soil of each of her neighbors.

Along Twin Creeks, at Hodges Pass, on Smith's Fork, along the shores of Bear Lake, and at other points near the eastern Idaho boundary, (all adjacent to the Oregon Short Line,) are extensive veins of excellent coal. Some of this is said to coke superbly. The famous Mammoth vein in this locality shows seventy feet of pure coal, and with companion veins, separated by veins of clay, will aggregate 200 feet in thickness. Rich copper ores are also found in this region. A good quality of lignite has been found near Boise, bituminous at Horseshoe Bend, twenty miles from Boise, also between the Payette and Weiser, seventy miles, and at the Big Bend of Snake river, ninety miles from Boise. A good blacksmithing coal has also been found on Sucker creek, twenty-two miles north of Silver City, and several large deposits near Lewiston, in northern Idaho.

Idaho bids fair to rank first among our "iron States." Near Rocky Bar is a seven-foot vein of ore carrying fifty-six per cent pure iron. Within two miles of Challis is an immense body of micaceous iron, yielding fifty to sixty per cent of that metal. At several points along Wood river oxide ores carrying sixty to seventy-five per cent iron are found in inexhaustible quantities. Three miles east of South Mountain, in southwestern Idaho, is the great Narragansett iron mine, where a surface of 100 by 600 feet of the vein has been stripped, and the limit not reached. A cut into this vein twenty feet deep and fifty feet wide exposes a solid body of magnetic and specular ore, which contains ninety-five to ninety-eight per cent pure iron. This ore is so pure and easily smelted that it has, in its natural state, been cast into shoes and dies for stamp mills at the Silver City foundry. A fifteen-foot vein of hematite, near by, is also very rich in iron, and carries $30 per ton in gold.

Oregon and Washington abound in coal and iron. Near Baker City are mammoth deposits of metallic iron carrying 80 to 95 per cent of that metal. Vast coal fields are found along Puget Sound, from which 300,000 tons are now mined annually. Blast furnaces are turning out excellent pig iron from the ores of the Williamette Valley and Puget Sound.

Besides these interests, there are rich copper mines in various localities in Idaho; a mountain of sulphur running to 85 per cent pure sulphur at Soda Springs, on the Oregon Short Line; several ledges of fine merchantable mica in western Idaho, white, pink, gray and other shades of superb building stone, and a veritable mine of wealth in salt springs. These are in eastern Idaho. The waters are charged with the finest and purest salt in the world—superior to the celebrated Onondaga brand, manufactured at Syracuse, while neither "Liverpool," "Turk's Island," or "Saginaw" salt approach it in purity, or are as white, clear, or soluble in liquids. The production runs up to 1,500,000 pounds annually.

The Forests.

NEARLY all the mountain country of western Montana and central and northern Idaho, and the mountain and coast lands of Oregon and Washington, are covered by a growth of timber such as in diversity and size no other like space on the earth's surface can boast of. I have picked my way for miles through these forests, where the ground could not have given room for the cord-wood of trees felled and thus worked up.

Throughout western Montana and the central, northern and eastern parts of Idaho, easy of access from the Oregon Short Line, the woodlands possess a heavier growth than in a majority of the timbered States east of the Rocky Mountains, while in the remaining sections the timber supply is not inferior to that of the most of our prairie States. There are various varieties of fir, the white, red and black spruce, scrub oak, yellow and white pine, mountain mahogany, juniper, tamarack, birch, cottonwood, alder and willow. Along the Clearwater, in north Idaho, and in several other sections, white pine logs 100 feet long and five feet in diameter, and red and white cedar trees two to five feet in diameter are common.

But it is further west that the monarch of the forest is the ideal monarch. Said the eloquent Samuel Wilkeson, after a careful tour of observation: "Oh! what timber. On the Atlantic slope, where it was my misfortune to be born, and where for fifty-two years I have been cheated by circumstances out of a sight of the real America, there are no woods. East of the Rocky Mountains trees are brush. They may do for brooms; pieces of ships are got out of them, and splinters for houses. But the utmost throe of the Atlantic-slope soil and climate could not in ages produce a continuous plank which would reach from stem to stern of a thousand-ton clipper-ship. Puget Sound, anywhere and everywhere, will give you for the cutting, if you are equal to such a crime with an axe, trees that will lie straight on the ground, and cover two hundred and fifty feet of length and measure twenty-five feet around, above two men's heights from the ground (they are cut from stagings), and that will yield one hundred and fifty lineal feet of clear, solid wood below the branches. They are monarchs, to whom all worshipful men inevitably lift their hats. To see one fall under blows of steel or under the embrace of fire is to experience a pang of sorrow."

The varieties of chief economic value are Douglas or Oregon pine, yellow fir, black spruce, hemlock, white pine, yellow pine, Oregon cedar, arbor vitæ, yellow cypress, oak, broak-leaved maple, dogwood, arbutus, aspen and cottonwood. The Douglas pine, or red fir, attains a height of 200 to 300 feet, is straight as an arrow, and is the red hickory of America. It is sent across two oceans to the ship-yards of Europe, because, as the French experts at the Toulon dock yard reported, after subjecting it to the severest tests known, "the masts and spars are woods rare and exceptional for dimensions and superior qualities, strength, lightness, absence of knots and other grave vices; they may be bent and twisted several times in contrary directions without breaking." Lloyds, the English builders, report of it: "We have tested all the woods in the world, and find the red fir best." A stick of this wood an inch square resisted a pressure of 2,000 pounds, while other woods broke at 1,500 and 1,600 pounds. They broke square off, while finally, when the red fir did part, it broke in a long rent. Along Puget Sound frequently a single tree is cut which when ready for shipment *is worth as much as would pay for 200 acres of government land on which it grew.*

Hon. Wm. H. Seward said, in 1869, "sooner or later the world's ship-yards will be located on Puget Sound." Ships may be built stauncher from the long timbers of Puget Sound than it is possible to make eastern or European built vessels, and the cost is much less. For instance, in the cost of a 1,200 ton ship built in Bath, Maine, and a similar one constructed at Puget Sound, there is a saving of $20,000 in favor of the latter, and when completed it is more safe and durable than the more costly one.

The census bureau estimates that the area of good timber on the Pacific Northwest, which often grows on the best soil, capable, when denuded of its timber, of producing any thing, exceeds that of Michigan, Wisconsin, and Minnesota, the great lumber-producing region of America; and further calculates that the day is near at hand when the lumber industry there will reach the figures of the pineries of the Upper Mississippi and the lakes. Their estimate does not include the forests at the headwaters of the Columbia in western Wyoming, northwestern Idaho and western Montana, which are now equal to those of Maine before they had felt the axe.

When the lumber industry of the Columbia river country has reached the importance predicted by the census bureau, it will amount to $125,000,000 annually, to say nothing of the millions involved in manufacturing the plain lumber into the many forms demanded for the use of man. The Washington Territory product of 300,000,000 feet in 1881 went largely to the markets of South America, the Sandwich Islands, eastern Asia and Australia, and to a less extent to marts of our country. When the Oregon Short Line reaches these unequaled forests and affords them a market in our prairie States, (as short a haul to some of them as the lumber of the northern lake region now requires) our home consumption will be added to the foreign to create a stupendous activity in Columbia's "odorous piney woods," as well as an enormous business for the railroads, and a better and cheaper material for the consumer. It is time some new forest land was opened up, for our eastern forests are vanishing as tinder in a blaze. About 35,000,000 acres of our best eastern forest area have been stripped of trees in the past ten years. With the present tremendous consumption by railroads, manufactures and building operations continued a

little more than twenty years all the heavy natural forests of the east will have been swept away. A vast commerce will then be reversed—the west will supply the east. Preparation is being made for this on Puget Sound. There are seven large export mills at work, with a daily capacity of 700,000 feet, and several smaller ones, with others building. A barrel factory turns out 3,000 barrels daily, and lath and shingle mills that turn out a good cargo in the same time. Loggers are wanted at good wages.

Scenery, Springs, Game and Fish.

"Oh! there is sweetness in the mountain air,
And life which bloated ease can never hope to share."

TO the tourist the unrivalled panorama afforded by the Columbia for over two thousand miles will always be the crowning attraction of our continent. It alone of all the rivers of the West has broken those stern barriers, the great mountain ranges beyond the plains. Through the fierce struggle which thus resulted have we a glorious legacy—the grandest river scenery in the world. The palisades of the Hudson, the overhanging cliffs of the upper Mississippi and the embattled precipitous environment of the Rhine are here on a mammoth scale. There are also elements of grandeur in views of snow-clad peaks, of entrancing beauty in peaceful passages of the great river through miles upon miles of mountain-locked lakes, and of the phenomenal and marvelous in the wonder-land of Yellowstone not possessed by any of the world's more noted rivers.

No such cluster or aggregation of wonders exist anywhere as are found in Yellowstone National Park, near the headwaters of the Columbia—a public pleasure ground, by the way, one-third larger than Rhode Island. The largest springs and geysers in the world are there—10,000 of them, say the authorities—some of which at frequent intervals throw upwards 250 to 300 feet rivers of boiling water. There are fountains of boiling paint of most vivid colors, mountains of glass, canons excelling in depth, carving and coloring any on earth, lakes whose shore lines run off into the hundreds of miles, mountains of sulphur, and cataracts of volume and height not found elsewhere. The lovely cascade of Tower Creek is not equaled by Minnehaha; while the Great Falls of the Yellowstone, so intimately connected with all the strangely fascinating enchantments of the delicately-carved and gorgeously crowned Grand Canon, excel in sublimity the world-known Niagara. The height of Niagara Falls—164 feet—is 226 feet less than our beautiful falls of the National Park.

Following the Snake out of this charmed region we soon pass those mighty sentinels the Three Tetons, whose wondrous height, abruptness and bulk is, according to the opinion of noted foreign travelers, the nearest approach our great mountain ranges afford to the Matterhorn of the Alps, the highest being 13,833 feet above the sea. This is the grandest view afforded by the Utah & Northern Branch of the Union Pacific Ry. Southward and westward in Southern Idaho the trail is being blazed for the Oregon Short Line, where the shriek of the iron horse is soon to blend with the "roar of waters that have in solitude been making rainbows since the birth of the world" are the American Falls, a fifty foot plunge of the foaming torrent over black lava crags into a dark weird basin—the falls spaned by a splendid iron bridge of the railway just noted. Some 75 miles westward a subterranean river pours from mysterious openings in the north side of Snake River Canon, dashing with terrific force and volume into the waters of the Snake, 150 feet below. Nameless here this singular stream is supposed to be the resurrection and new life of Lost River which died and was buried in the desert some seventy miles to the north.

Near by is that greater wonder, the Western Niagara—Shoshone Falls—which the lamented Richardson thus eloquently pictured: The cataract is unequaled in the world, save by Niagara, of which it vividly reminds us. It is not all height like Yosemite, nor all breadth and power like the Great Falls of the Missouri, nor all strength and volume like Niagara; but combines the three elements. The torrent is less than Niagara, and its crescent summit appears less than 1,000 feet wide. But the descent—200 feet—is one-third greater; while above the brink solemn portals of lava rising for hundreds of feet on each bank supply an element of grandeur which the monarch of cataracts altogether lacks. The fall itself is of purest white, interspersed with myriads of glittering, glassy drops—a cataract of snow with an avalanche of jewels. Mocking and belittling all human splendor, Nature is here in her lace and pearls, her robe of diamonds and tiara of rainbow."

While these grand scenes line the Snake, far to the northward, along Clarke's Fork, is an equal accumulation of splendors of the physical world. Lake Pend d'Oreille, through whose entire length of 100 miles Clarke's Fork plows its way, and although five hundred miles from the ocean, could float the navies of the world; Lake Coeur d'Alene, nearly forty miles long, and scarce rivalled anywhere for magnificence of Alpine setting or beauty of pine-clothed isles; Spoken falls, a cataract of wondrous power and beauty, and some of the most sublime vistas of canon scenery mind can conceive are undying feasts for the tourist's eye.

Down the Columbia, from the junction of Clarke's Fork with the Snake, is 200 miles of river scenery unequalled in the world. To the south,

in the vast seclusion of eastern Oregon, is the mountain range which of all others the esthetic Oregonian loves. Lower than the Sierras or the Rockies, it has a grace of outline and a lustre of foliage unknown to either. I refer to the Blue Mountains, the fairest August garden on earth. Cape Horn, 700, and Castle Rock, 1,000 feet high, are distinguishing landmarks which rise precipitous from the Columbia's edge. The Cascade Range shoots up from 1,000 to 3,000 feet along the passage of the mighty river through it, and from its battlements are such garnishings of a wondrous picture as Multnomah Falls, 800 feet high, La Tourelle Falls, 400 feet, and half a dozen others, beside which Minnehaha or Montmorency would be counted very modest creations. Through frequent openings in gorges, or at the verge of a beautiful stretch of plain, can be seen towering above all other objects Mount Hood, snow-covered from base to summit, "oppressive in its majesty, beautiful in form, angelic in its whiteness—the union of all that is great and pure and impressive."

The name of mineral springs—healing waters—is legion. Hot and cold; delicious as the nectar of the gods, or offensive enough for one's worst enemy; soda, sulphur, iron, salt, magnesia—these and others in every form known—in number sufficient for the uses of multitudes and in volume and efficacy apparently ample "for the healing of the nations." The most remarkable group in America, and the only one I have space to note, are the Soda Springs of Oneida County, eastern Idaho. They are situated in a magnificent valley 7,230 above the level of the sea, and are easily reached from the east or west by the Oregon Short Line, which passes through this region on its way to Portland. Within a radius of two or three miles are scores of large springs, the waters ranging from almost ice cold to warm, containing magnesia, soda, iron, sulphur, and various other constituents, in such proportions as to have a great power on disease, and some of them being so highly charged with carbonic acid and other gases as to prove a most pleasing beverage. The waters are a superb tonic, and are effecting remarkable cures of skin and blood diseases, dyspepsia, rheumatism and many other ills our flesh is heir to. The Soda Springs region abounds in other attractions worth crossing our continent to see, among them magnificent drives, beautiful lakes, extinct volcanoes, geyser cones, sulphur mountains, a boiling lake of the same material, some wonderful caves, superb fishing and hunting, and an atmosphere calculated to bring the blush of health to any but most hopeless invalids. It promises to be the great Sanitarium of the West, and for years has been the resort of hundreds annually, who have been willing to "stage it" for 40 or 50, or even 100 miles to reach its charmed precincts. The delicious soda and magnesia waters are becoming so popular that tens of thousands of bottles are shipped each season to distant consumers. Modest accommodations at modest prices are available at a quiet hostelry of the village. A large hotel, with beautiful grounds, will be added next season by the Union Pacific Company to what nature has so gloriously commenced.

FISH AND GAME.

"Merry it is in the good greenwood,
When the mavis and merle are singing,
When the deer sweeps by, and the hounds are in cry,
And the hunter's horn is ringing."

I put the fish first, for in its food fishes this region has a mine of wealth better than its best vein of gold or silver. Its innumerable rivers, creeks and rivulets, snow-fed and mountain-born, clear almost as the azure above, are inhabited by myriads of salmon, trout, grayling and other fish, gamy and eager enough for the bait to make the heart of the real disciple of Izaak Walton "beat and burn and bound with rapture." But its great rivers, bays and sounds are so alive with the fish of commerce that they have a more important interest to the thoughtful economist. Salmon of many varieties abound literally in millions, and are taken and canned by the thousand daily, nearly 1,000,000 cases—24,000,000 cans, or 50,000,000 pounds—having been exported last year. Then there is another fish so superior to the salmon that, according to a connoiseur, the latter "is not worthy of lying in the same basket with it, and the speckled trout only as a gracious favor should be permitted to get into the frying-pan in which it has been cooked." This is the cod, the true *Gadus*, having the flavor of the Block Island cod, and of food for men or gods nothing more can be said than that. There seems to be enough of these along the north Pacific coast to supply the fishmongers of all nations. Sturgeon are of immense size, and so abundant that isinglass made from them has long been an article of export. Herrings are in countless numbers. Smelts—precisely the delicate fish of New York Bay—are taken by tons. Dog-fish in incredible quantities are manufactured into oil for export to distant parts of the world. Rock-fish, deep sea perch and other valuable varieties are as abundant as those named, as well as crabs, shrimps, oysters, clams, etc.

According to the census just taken, there are no less than 16,746 persons engaged in the fishing business on the Pacific coast, most of them in the region treated in these pages. Of the total 11,555 are fishermen and 5,190 are share or factory hands. There are engaged in the business 5,547 boats and 53 vessels. The total value of the plant, consisting of boats, vessels, apparatus, outfits and buildings, is given at $2,748,383. The total products last year amounted in value to $9,548,277. On the Columbia River the salmon fishing and canning business has the best development. Nearly 7,000 fishermen and factory hands are employed, and the value of the product last year was nearly $3,000,000. A grand stimulus will be given this industry by the completion of the Union Pacific's Oregon Short Line and the Northern Pacific, and vast shipments of this delicious and healthy food will find their way into the interior of our own country—constituting a luxury within the reach of all—instead of being so largely taken 10,000 miles by ocean to foreign lands.

Of game they have the buffalo, black, brown and

grizzly bear, elk, moose, antelope, deer, mountain sheep, fisher, martin, wolf, mink, otter, goose, duck, prairie chicken, pheasant, grouse, etc., in great abundance.

In truth the finest fishing and hunting in America is found in every nook and corner of this northwest, and he must be a novice indeed who cannot find ample return for efforts bestowed within a dozen miles of many of the leading cities. Butte City, Montana, on the Utah & Northern Branch of the Union Pacific, Helena, Virginia and Deer Lodge in the same territory, Boise City, Baker City and Walla Walla, further west, and all accessible via the Oregon Short Line, are among the best points for outfitting and rendezvous for the sportsman.

"The Course of Empire."

WHERE this region meets the sea ends the American "course of empire." Here, if not before, must our wandering capital and industry forever make its stand. *Westward rolls ten thousand miles of ocean*, and its farther shore gives no worthy welcome. Therefore the development of this field carries with it an interest most intense. How quickly the destiny I have sought to outline shall be reached depends upon that greatest of all civilizers, the railway. On the accompanying map are shown only completed lines, and those now building. Every mile of line laid down will doubtless be constructed by the close of 1883. The Utah & Northern Branch of the Union Pacific has reached Butte City, Montana, giving a Pullman Palace car route to the Clarke's Fork country, and is pushing down the Deer Lodge valley where it will soon combine with the Northern Pacific for the development of all the country westward to the Columbia. The Oregon Short Line branch of the Union Pacific is pushing westward across southern Idaho, its mission being to develop the Lewis Fork or Snake country. About 300 miles of this line is graded; it will reach the Wood River and Boise country this year, and in 1883 connect at or near Baker City, Oregon, with the Oregon Railway and Navigation Co's. line, forming a through broad gauge road from the East to Walla Walla, Portland and Puget Sound, and a continental route 700 miles shorter to Asia than our present one. Necessarily branch lines will be constructed up many fertile valleys to the rich mining regions at their heads and thus within two years at farthest, will the "Land where Rolls the Oregon" be marching with giant strides toward a glorious future.

This subject, of almost infinite importance, has received but little attention. Its literature is so meager that we turn in despair from our best public and private libraries to that indefatigable source, the modern railway. The Union Pacific Company is making strenuous efforts to fill the want by furnishing reliable and concise documents descriptive of each of the commonwealths herein outlined. They can be obtained free at any of the Company's agencies, or by addressing J. W. Morse, Esq., General Passenger Agent, at Omaha, Neb.

DENVER TIMES PRINT.

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